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State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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June 13, 2000

TO: Minerals File

FROM: Anthony A. Gallegos, Senior Reclamation Specialist aag

RE: Site Inspection, LDS Corp of the Presiding Bishopric, Little Cottonwood Granite Quarry, S/035/017, Salt Lake County, Utah

Date of Inspection:	June 2, 2000
Time of Inspection:	1104 - 1235
Conditions:	Warm, clear skies
Participants:	Greg Baptist, Grading Inspector, Salt Lake County; Mary Ann Wright, Susan White, Jared Sorensen, Tony Gallegos, DOGM
Purpose of Inspection:	To examine the condition of the site.

We met Greg Baptist at the fenced off parking area at the bottom of the road up to the quarry site. A chain link fence is placed between the road side and the parking area, but the gate is not locked. Greg described the recent meetings between Salt Lake County and representatives of the LDS Church regarding the reclamation and restoration of the site. A regrading plan is expected to be submitted to the County today and the revegetation plan is expected to be submitted in July. The regrading work is expected to begin within the next week if the County approves of the regrading plan. The regrading work is projected to last ten weeks or more. The County and LDS Church plan to initiate a public relations campaign to inform the community of the work being done, and what the public can do to minimize impacts to the restoration area. The revegetation plan must use indigenous plants and materials. Damaged or destroyed trees will be replaced at a 2:1 or 3:1 ratio depending on the diameter of the tree. Greg left the site about 1140 to attend to other matters.

We walked up the road to the upper quarry site first and then came back down and walked along the lower road to the lower site. There were several drainage diversions on the road directing drainage and sediment into basins and/or silt fences. The steep sections of the road leading to the upper quarry site included water bars/ditches to direct surface water runoff across the road. The road sections at the upper quarry areas were composed of loose soil and rock materials. The road showed signs of repetitive foot traffic, creating a packed trail leading through the quarry site towards the base of the granite faces. At the time of this visit there were climbers on the granite face above and east of the quarry site, and another group of climbers had walked past us while we were down in the parking area.

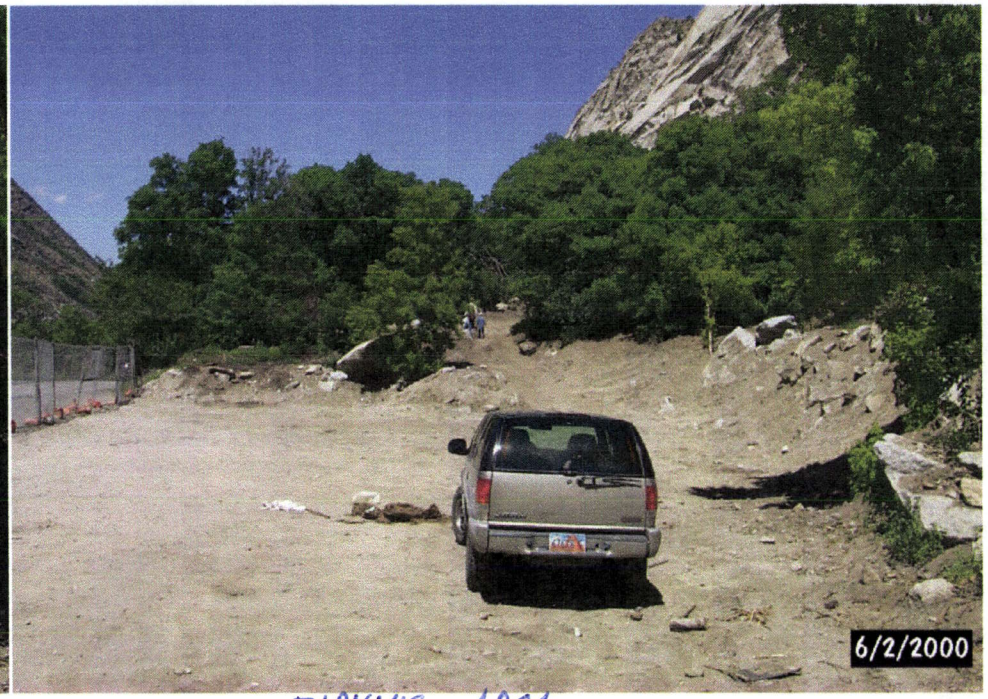
In the uppermost quarry area there were several larger boulders resting on soils which could erode after a series of rain events and cause the boulders to slide. Given the location and size of the boulders, and the switchback road cuts, it is doubtful that these boulders would move beyond the road cut if they did happen to slide loose. The road to the upper sites includes some soils which could be suitable for revegetation; however, the regrading of the road cut and dispersal of rocks and boulders would limit the areas where containerized trees could be planted. Digging in the rocky soil in this upper area to plant containerized stock by hand after the earthwork is completed could be difficult. A number of photographs were taken from this upper vantage point to document the site disturbance.

We then walked down to the intersection where the lower road split off toward the west. The lower road has considerably more soil material than the upper road. The soil volume and conditions in this lower quarry area appear to be more favorable to seeding or hand planting. Photographs were taken of this lower area to document the current conditions. Plastic orange fencing was visible in several locations around the outside of the project area with danger signs.

In conclusion, the Division will coordinate with Salt Lake County regarding the regrading and revegetation plan for this site. The Division may be able to provide the County with information on earthwork and revegetation techniques which have been successful in reclaiming mine sites. Greg agreed to provide the Division with copies of the regrading and revegetation plan as they became available.

jb
cc: Kerry Nielsen, LDS Church
Greg Baptist, Salt Lake County, Public Works Department
Mary Ann Wright, Associate Director
O:\s35-17ins.

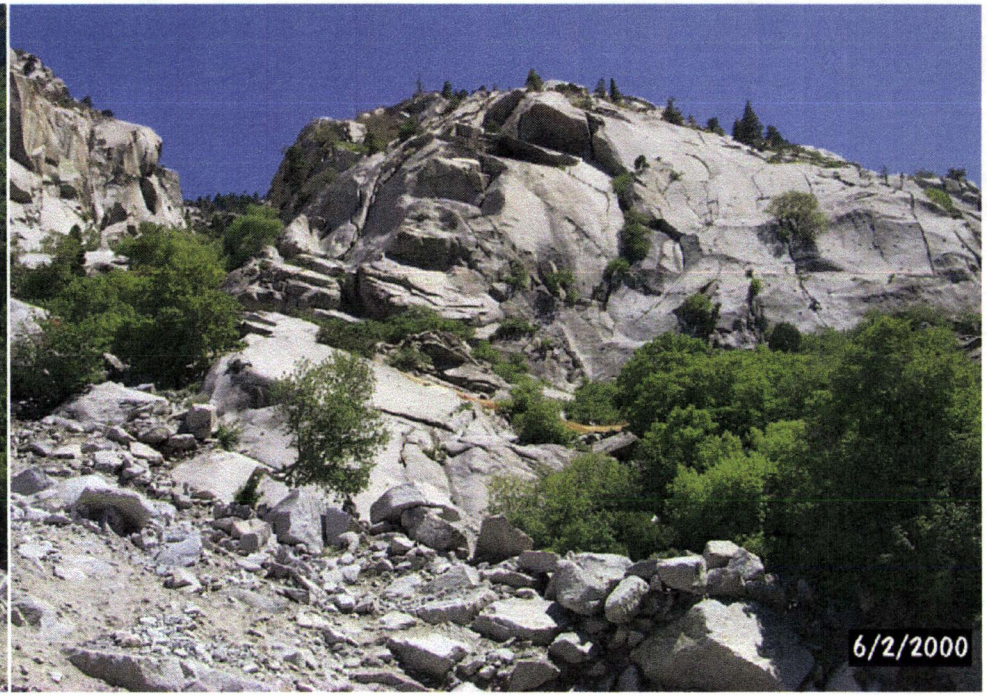
LOOKING DOWN ROAD ON PARKING AREA



PARKING AREA

SILT FENCE / SEDIMENT BASIN

S/035/017 1/5



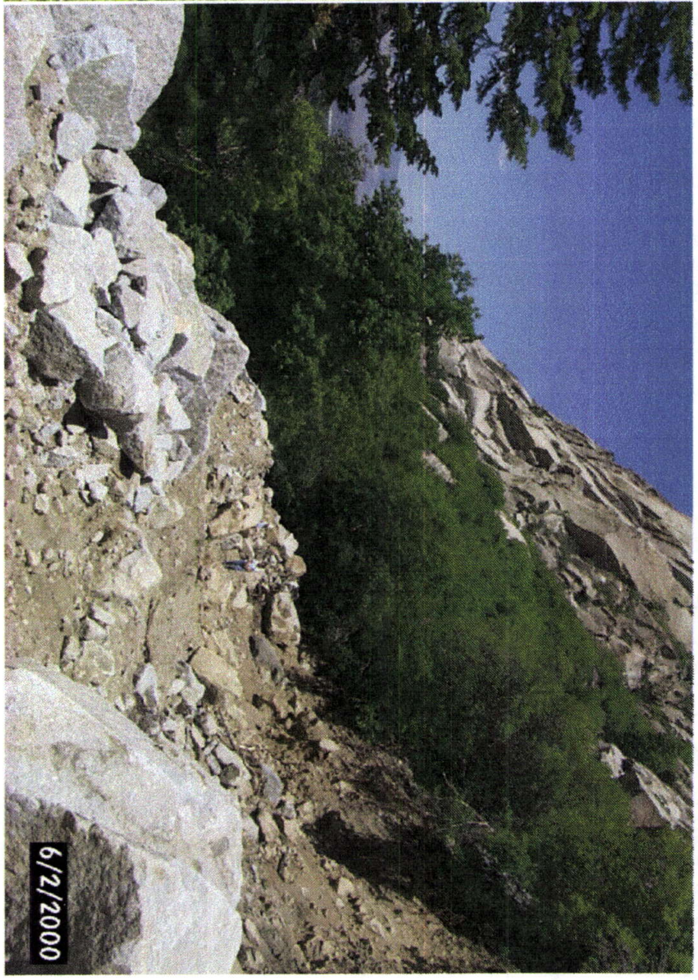
LOOKING DOWN FROM UPPER REMOVAL AREA

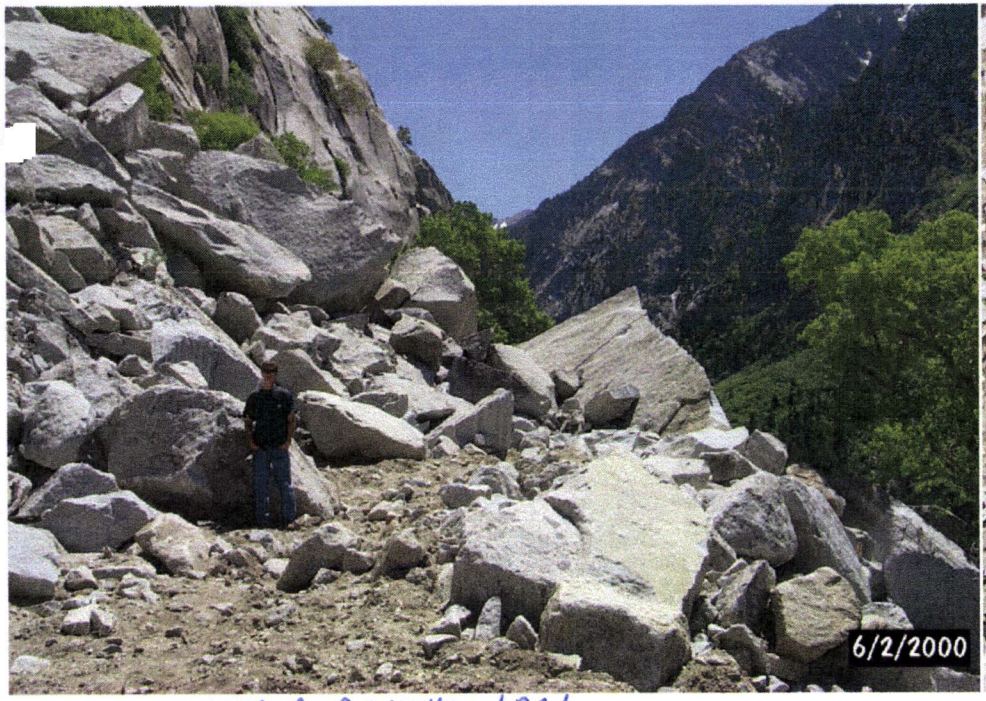
UPPER REMOVAL AREA

5/2 7/01/5301S

9/035/017 3/5

LOWER REMOVAL AREA - FROM ABOVE

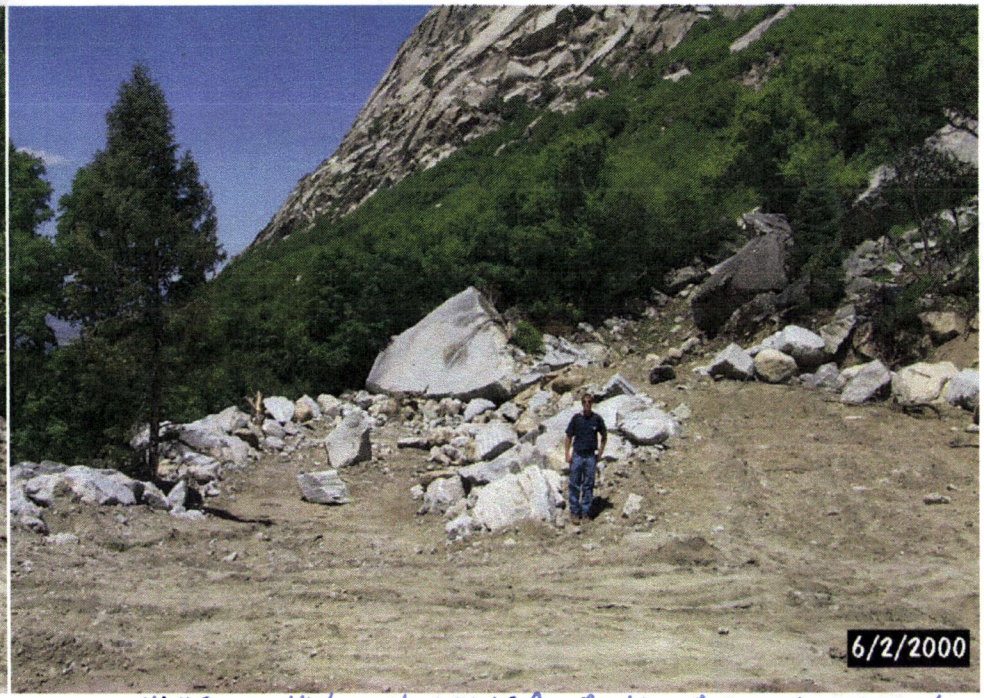




UPPER REMOVAL AREA

5/035/017 41.

LOOKING ~SE ON LOWER ROAD REMOVAL AREA

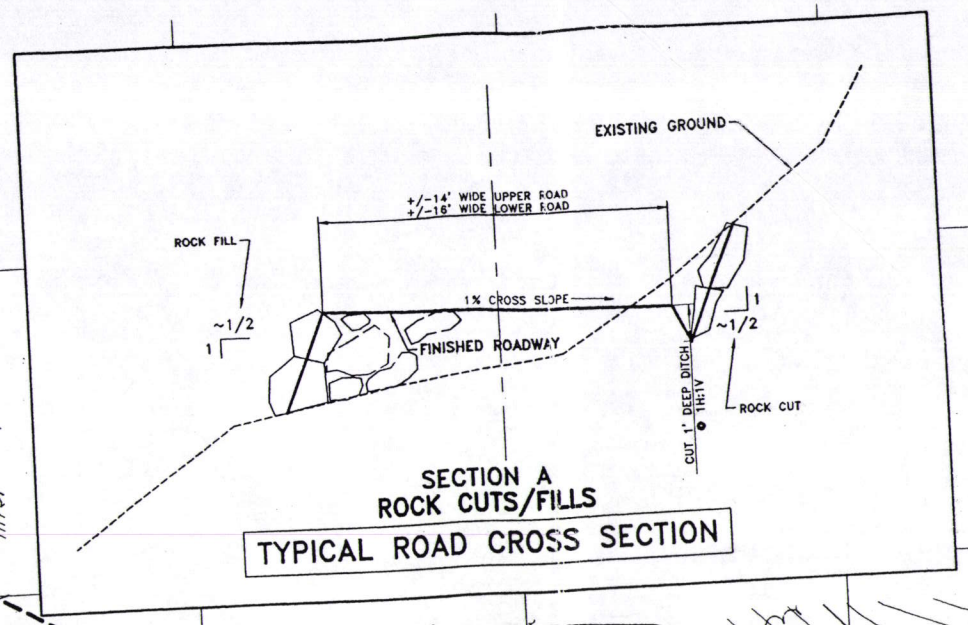


LOOKING ~ NW ON LOWER ROAD REMOVAL AREA

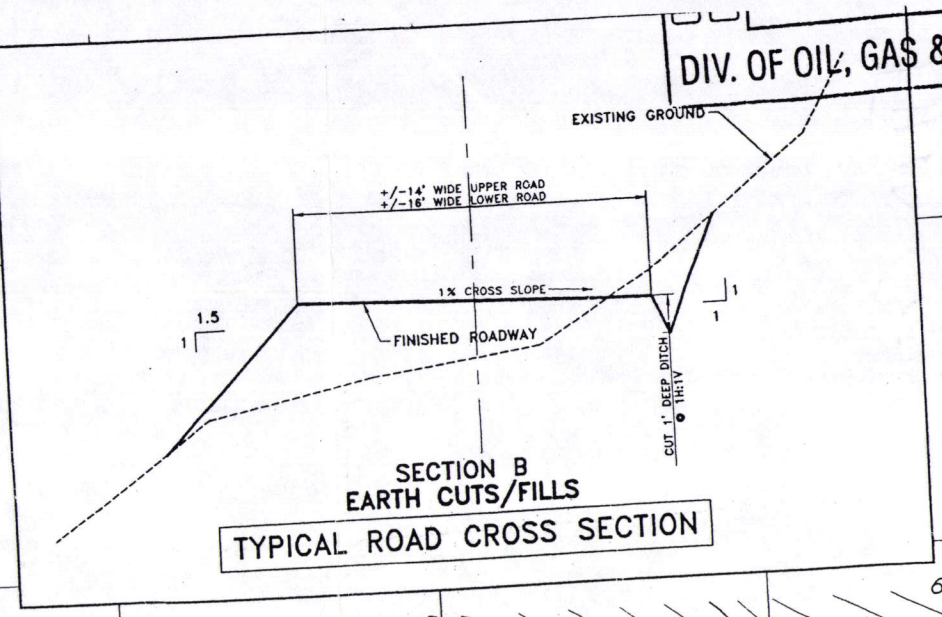
FENCING & WARNING SIGNS AROUND SITE

LOWER ROAD

5/035/017 5/4



SECTION A
ROCK CUTS/FILLS
TYPICAL ROAD CROSS SECTION



SECTION B
EARTH CUTS/FILLS
TYPICAL ROAD CROSS SECTION

LIMITS OF DISTURBANCE
PLACE ORANGE BARRIER FENCE ALONG LIMIT OF DISTURBANCE LINE (WHERE ACCESSIBLE) 6' HIGH MINIMUM

1H:1V CUT SLOPE

1H:1V FILL SLOPE

BOULDER FIELD

4+49.57

3+00

2+00

1+00

0+00

5+61.42

A&B

UPPER ROAD
14' WIDE FOR EQUIPMENT ACCESS
(SEE PROF-1 FOR PROFILES)

PLACE 12" HDPE CORRUGATED CULVERT AT NATURAL DRAINAGES OR AT 100' C.C. FOR CHANNELING RUNOFF AS REQD. FOR DRAINAGE. (SEE DETAILS XSL-1)

PROPOSED FINISHED GROUND CONTOUR INTERVAL: 2 FEET

EXISTING GROUND CONTOUR INTERVAL: 5 FEET

STAGING AREA
(MINIMIZE DISTURBANCE TO THE EXTENT POSSIBLE)

SELF CONTAINED PORTABLE TOILET ANCHOR AS REQUIRED TO PREVENT TIPPING. (SERVICE OFF SITE)

PLACE STRAW BALES AND SEDIMENT CONTROL (SEE SECTION A-A/XSL-1)

BOULDER (TYP.)

LOWER ROAD
16' WIDE FOR LOADING ACCESS
(SEE PROF-1 FOR PROFILES)

RAMP THROUGH CUT BANK

STONE LOAD OUT AREA

LIMITS OF DISTURBANCE
PLACE ORANGE BARRIER FENCE ALONG LIMIT OF DISTURBANCE LINE (WHERE ACCESSIBLE) 6' HIGH MINIMUM

EXISTING PARKING AREA

TEMPORARY LOCKABLE GATE

TEMPORARY CHAIN LINK FENCE W/LOCKABLE GATES

PROPERTY LINE

STATE HIGHWAY NO. 201

PROPERTY LINE

Scale in Feet
0 50 100

CONSTRUCTION NOTES:

1. Construct road to the extent possible with the minimum amount of cut/fill and hillside damage. Use excavation rock material and small boulders for creating road fills to reduce fill requirements and to allow steeper side slopes. Protect side cut/fill slope with rock to minimize erosion. Rock slopes are anticipated to be 1/2H:1V. Steeper slopes may be possible when conditions allow. Steeper than 1/2:1 will require approval by the engineer.
2. Road cut shall be constructed with the minimum width needed for access to the boulder field, however, shall not exceed those dimension given on the drawings.
3. Slope road surface towards the hillside as shown on the Typical Road Section to assist in minimize erosion and sediment movement. Construct drainage bars across road surface at 30-ft. intervals to direct runoff into the hillside drainage ditch.
4. Provide culverts and sediment catch basins at all natural drainage swells or at 100-ft. intervals, whichever is greater. Construct sediment catch basins and culvert opening, as shown on Sheet XSL-1, Sediment Basin Detail.
5. All work activity must be contained inside of the Limit of Disturbance. Disturbed areas within the Limit Line will require restoration. Actual disturbance is to be kept to the minimum required to perform the work. ie. park equipment around larger trees, avoid larger trees with road cuts by adjusting alignment, or stabilizing bank, etc.
6. Limit of disturbance fence (perimeter) shall have signs placed at 50-ft. intervals facing out that read, "WORK AREA - DANGER - PLEASE KEEP OUT"

Topography by OLYMPUS AERIAL SURVEYS, 1970

REVISION/DESCRIPTION	DATE	NO.	REVISION/DESCRIPTION	DATE
ORIGINAL SUBMITTAL	5-MAR-98			
ADJUST ROAD ALIGNMENTS PER S.L. COUNTY, UPDATE BASED ON NEW FIELD TOPO INFORMATION	18-MAR-98			

5/035/017

THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS
GRANITE EXTRACTION PROJECT

DRAWN BY:	R. TATE
CHECKED BY:	S. ANDERSON
CLIENT CONTACT:	K. NIELSEN

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ENGINEERS LAND SURVEYORS CONSTRUCTION MANAGERS

SITE GRADING PLAN
AND DRAINAGE CONTROL DETAILS

GRANITE EXTRACTION PROJECT
APRIL 1998

FIELD COPY

5/035/017 6/2/00 INSPECTION